## REMARKS/ARGUMENTS

Claims 1-5 are pending herein. Applicants respectfully submit that claims 1-5 are in condition for allowance for the reasons explained below.

Examiners Kitov and Toatley are thanked for courtesies extended to Applicants' representatives during a telephonic interview on March 10, 2004, the substance of which is incorporated below.

1. Claim 5 was rejected under §112, second paragraph. Applicants respectfully traverse this rejection.

In the Office Action, Examiner Kitov asserted that the limitation "said sheet" recited in line 17 of claim 5 does not have sufficient antecedent basis. Applicants respectfully submit, however, that proper antecedent basis for "said sheet" throughout claim 5 is found, for example, in line 12 of claim 5 (see page 8, line 3 of the September 4, 2003 Amendment).

For at least the foregoing reasons, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

2. Claim 1 was rejected under §103(a) over Matsunaga in view of Tomanı. Applicants respectfully traverse this rejection.

Claim 1 recites an electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member, a metal member, and a bonding layer. The ceramic electrostatic chuck member and the metal member are bonded with the bonding layer. The bonding layer comprises at least a first outermost bonding layer bonded to the ceramic electrostatic chuck member, a second outermost bonding layer bonded to the metal member and a polyimide

layer disposed between the first and second outermost bonding layers. Each of the first and second outermost bonding layers comprises a silicone layer.

In the Office Action, Examiner Kitov admitted that Matsunaga's outermost bonding layers (20 and 14 shown in Matsunaga's Fig. 1) are not silicone bonding layers. In an attempt to overcome the admitted deficiency of Matsunaga, Examiner Kitov relied on Tomaru as disclosing silicone bonding layers and referred to elements 18 and 20 in Tomaru's Figs. 1 and 2. Examiner Kitov asserted that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Matsunaga solution by adding the bonding silicone layers, because of the silicon [sic., silicone] advantages, such as, according to Tomaru et al. (col. 1, lines 63-67), the excellent thermal conductivity and heat dissipation and ability to withstand high temperatures" (Office Action, page 3, lines 12-16).

During the telephonic interview, Examiner Kitov agreed that the sole motivation set forth in the Office Action for combining the applied references, (i.e., replacing Matsunaga's outermost layers 20 and 14 with the adhesive/primer layers 18 and 20 of Tomaru), is that such a substitution would have allegedly been obvious in view of the good thermal conductivity and heat-dissipation characteristics of silicone recited in Column 1, lines 63-67 of Tomaru. Applicants respectfully submit, however, that the disclosure of Matsunaga expressly contradicts this alleged motivation to combine these references. Specifically, Matsunaga expressly states that it is desirable that the outermost layers 14 and 20 "have excellent thermal resistance" (see Matsunaga, Col. 4, lines 16-18), which is the opposite of good thermal conductivity.

Applicants respectfully submit that the only motivation to combine the references suggested by the PTO is actually in direct contradiction to the express disclosure of the

primary reference. Indeed, since Matsunaga expressly states that the layers 20 and 14, and particularly 14, are thermally resistant layers, Applicants respectfully submit that replacing these thermally resistant layers with a silicone rubber layer having a high thermal conductivity, as disclosed in Tomaru, would actually achieve the *opposite* result (compared to providing a thermally resistant layer). Thus, Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to replace Matsunaga's thermally resistive outermost layers 20 and 14 with Tomaru's thermally conductive silicone adhesive/primer layers 20 and 18, since thermal conductivity is the opposite of thermal resistance.

Further, Applicants respectfully submit that the silicone rubber characteristics recited in Column 1, lines 60-67 of Tomaru, on which Examiner Kitov relied to support the alleged motivation for combining the applied reference, actually relate to the characteristics of the silicone of the second insulating layer in the context of a wafer receiving surface, not as an adhesive layer interposed between a ceramic and a metal, as in Matsunaga and as claimed.

For at least the foregoing reasons, Applicants respectfully submit that claim 1 defines patentable subject matter over the applied references, and respectfully requests that the above rejection be reconsidered and withdrawn.

3. Claims 2 and 4 were rejected under §103(a) over Matsunaga in view of Tomaru and further in view of *In re Aller*. Applicants respectfully traverse this rejection.

Claims 2 and 4 each directly depend from independent claim 1, which is discussed above in section 2. Since independent claim 1 defines patentable subject matter over the applied references for the reasons explained above, Applicants respectfully submit that claims 2 and 4 likewise define patentable subject matter over the applied references by virtue

of their dependency from independent claim 1. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

4. Claim 3 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of Parkhe. Applicants respectfully traverse this rejection.

Claim 3 depends directly from independent claim 1, which is discussed above in section 2. Since independent claim 1 defines patentable subject matter over Matsunaga and Tomaru for the reasons explained above, Applicants respectfully submit that claim 3 likewise defines patentable subject matter over the applied references by virtue of its dependency from independent claim 1. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

5. Claim 4 was rejected under §103(a) over Matsunaga in view of Tomaru and further in view of McMillin. Applicants respectfully traverse this rejection.

Claim 4 depends directly from claim 1, which is discussed above in section 2. Since claim 1 defines patentable subject matter over the applied references for the reasons explained above, Applicants respectfully submit that claim 4 likewise defines patentable subject matter over the applied references by virtue of its dependency from independent claim 1. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

6. Claim 5 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of Weldon. Applicants respectfully traverse this rejection.

Independent claim 5 recites a method for manufacturing an electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member, a metal member and a bonding layer. The ceramic electrostatic chuck member and the metal member are bonded with a bonding layer. The bonding layer has at least a first outermost bonding layer bonded to the ceramic electrostatic chuck member, a second outermost bonding layer bonded to the metal member and a polyimide layer disposed between the first and second outermost bonding layers. Each of the first and second outermost bonding layers comprises a silicone layer. The method comprises the steps of preparing a sheet comprising at least the first outermost layer, the second outermost layer, and an intermediate layer disposed between the first and second outermost layers. The intermediate layer comprises the polyimide layer. The method also includes the steps of sandwiching the sheet between the ceramic electrostatic chuck member and the metal member, vacuum-packing the ceramic electrostatic chuck member, the sandwiched sheet and the metal member into a vacuum-packing bag, and heating the vacuum-packed electrostatic chuck member, sheet and metal member under isotropic pressurization to bond them firmly.

Applicants respectfully submit that the method of claim 5 positively recites the steps of manufacturing the specific ceramic electrostatic chuck structure recited in claim 1.

Accordingly, Applicants respectfully submit that claim 5 defines patentable subject matter over Matsunaga and Tomaru for the same reasons described above with respect to independent claim 1. In that manner, even if one of ordinary skill in the art had used Weldon's manufacturing process to manufacture the electrostatic chuck of Matsunaga, as the Examiner suggested (see Office Action, page 6, lines 9-10), Applicants respectfully submit that such a skilled artisan still could not possibly have arrived at the present invention in view of the above-described deficiencies of Matsunaga and Tomaru.

For at least the foregoing reasons, Applicants respectfully submit that claim 5 defines patentable subject matter over the applied references, and respectfully request that the above rejection be reconsidered and withdrawn.

If Examiner Kitov believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, he is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted.

March 12, 2004

Date

1 Jack

Reg. No. 32,970

SPB/NJB/eav

BURR & BROWN P.O. Box 7068 Syracuse, NY 13261-7068

Customer No.: 025191 Telephone: (315) 233-8300

Facsimile: (315) 233/8320